

## COAL MINING AND RECLAMATION PERMIT APPLICATION TO REVISE A PERMIT (ARP)

**Issued To:** BENNOC INC  
P.O. BOX 208  
38722 NATIONAL ROAD  
MORRISTOWN, OH 43759

**Telephone:** (740) 782-1330

**ARP Type:**  
Pond Construction

**Permit Number:** D-1159  
**Application Number** R-1159-2

**Effective:** 01/05/2002

**Expires:** 01/25/2003

The issuance of this ARP means only that the application to conduct a coal mining operation meets the requirements of Chapter 1513 of the Revised Code, and as such DOES NOT RELIEVE the operator of any obligation to meet other federal, state or local requirements.

This ARP is issued in accordance with and subject to the provisions, conditions, and limitations of Chapter 1513 of the Revised Code and Chapters 1501:13-1, 1501:13-3 through 1501:13-14 of the Administrative Code.

The approved water monitoring plan for this ARP is:

**Quality:** N/A

**Quantity:** N/A

**Note:** Any previous condition(s) imposed on this permit, or subsequent adjacent areas, also apply to this ARP unless noted otherwise.

**Signature:**

Chief, Mineral Resources Management

**Date:** 01/05/2002

OPERATOR  
OPERATOR

X   New Submittal  
       Revised Submittal R-                     

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINES AND RECLAMATION**

**APPLICATION TO REVISE A COAL MINING PERMIT**

Note: Refer to the Division's "General Guideline for Processing ARPs" and "Requirements for Specific Types of Common ARPs" for guidance on submitting and processing ARPs.

1. Applicant's Name   BENNOC, INC.  

Address   38722 NATIONAL RD., P.O. BOX 208  

City   MORRISTOWN   State   OHIO   Zip   43759  

Telephone Number   740   -   782   -   1330  

2. Permit Number   D-1159   .

3. Section of mining and reclamation plan to be revised:  
  PART 2, ITEM H(6) & PART 3, ITEM E(2)  

4. Describe in detail the proposed revision and submit any necessary drawings, plans, maps, etc.:

  THIS REVISION IS TO ADD TWO SEDIMENT PONDS TO THE DRAINAGE CONTROL SYSTEM. SEE ATTACHED ADDENDA.  

5. Describe in detail the reason for requesting the revision:

  PONDS 018 & 018A WILL PROVIDE ADDITIONAL SEDIMENT STORAGE FOR THE #12 COAL REMOVAL AREA. DIVERSION DITCH DD1-A DIRECTING RUNOFF TO POND 001 WILL BE SHORTENED BY APPROXIMATELY 700' & DIVERSION DITCH DD-8A DIRECTING RUNOFF TO POND 008 WILL BE SHORTENED BY APPROXIMATELY 540'.  

6. Will this revision constitute a significant alteration from the mining and reclamation operations contemplated in the original permit?        Yes,   X   No.  
(Note: refer to paragraph (E) (2) of 1501:13-04-06 of the Ohio Administrative Code to determine if a revision is deemed significant.)

If "yes", complete the following items 7 through 9.

7. In the space below give the name and address of the newspaper in which the public notice is to be published.
8. In the space below give the text of the public notice that is to be published. (Include the information required by paragraph (A)(1) of 1501:13-05-01 of the Ohio Administrative Code.)
9. In the space below give the name and address of the public office where this application is to be filed for public viewing.

I, the undersigned, a responsible official of the applicant, do hereby verify the information contained in this revision request is true and correct to the best of my information and belief.

Larry Conway  
Print Name

10-8-01  
Date

Larry Conway  
Signature

President  
Title

Sworn before me and subscribed in my presence this 10th day of October, 2008 1

ELLEN M. LOPER, Notary Public  
State of Ohio  
My Commission Expires September 23, 2006

Ellen M. Greer  
Notary Public

**FOR DIVISION USE ONLY**

This request is hereby \_\_\_\_\_.

\_\_\_\_\_  
Chief, Division of Mines and Reclamation

\_\_\_\_\_  
Date

Addendum to A.R.P., Item 4  
Bennoc, Inc.

Chief,  
Ohio Department of Natural Resources  
Division of Mineral Resources Management  
1855 Fountain Square Court  
Columbus, Ohio 43224

**RE: Stream Buffer Zone Variance Request**

Dear Chief:

In accordance with O.A.C. Section 1501:13-9-04 (A)(1) and Hydrology/Permitting PPD #98-1, Bennoc, Inc. is hereby requesting a variance to conduct additional coal mining operations within the buffer zone of Stream "E" as shown on the enclosed A.R.P. map and described below.

**Specific Activities:**

**Unnamed Stream "E"**

Additional activities to be conducted within the buffer zone of Stream "E" consists of pond construction and the post mining reconstruction of Stream "E". Approximately 80 feet of the stream will be affected from the head of hollow to Station 0+80. See original permit for Stream Channel Reconstruction.

For purposes of this description, the beginning point of Stream "E" is located at the head of hollow, this beginning point is designated as Station 0+00 for Stream "E". Stream "E" flows in a southeasterly direction and discharges into Piney Creek. The entire stream is located within the permit area. There are no major suspected sources of impacts on this stream except for the limited watershed. This stream has not been affected by previous mining.

Pond 018A will be installed as soon as possible, and will take approximately one week to construct. To protect the downstream portion of Stream "E", construction of Pond 018A will be conducted during favorable weather conditions. This pond will be located partially within the buffer zone and encroaches on approximately 0.7 acres between the head of hollow and Station 0+80. Only that area necessary for pond construction will be affected. Construction will be done in a timely manner, stabilization by seeding and planting will be done as soon as possible after construction is complete and where possible, runoff from offsite areas will be prevented from flowing across disturbed areas. Silt fences and/or straw bales, and if necessary, sumps will be utilized to trap sediment during pond construction. The pond will be removed after mining. Removal, grading and seeding of Pond 018A will be done in the first appropriate season after successful vegetation has been established for at least two years to prevent post-mining affects on Stream "E". If removal occurs earlier than Division approval would first be sought and obtained.

The reconstruction plans for Stream "E" are contained in the original permit D-1159. The reconstruction of the stream will be conducted as expediently as possible during favorable weather conditions to minimize the duration of additional sediment contribution to Stream "E". Stream reconstruction will occur after mining is complete during the reclamation phase of the operation. The base channel will have a maximum grade of 11.3% and will be composed of cohesive mined soils from the mining operation. The channel cross section will be trapezoidal with 2:1 side slopes. No additional measures are planned for restoration of habitat and environmental conditions. The plan as submitted is adequate to restore habitat and environmental conditions to those that existed prior to mining. Disturbance within the buffer zone will occur until reclamation at the completion of mining.

Existing instream physical habitat conditions consist of substrates of boulder/slabs and cobble originating from sandstone with moderate silt and moderate embeddedness. The instream cover is moderate, consisting of overhanging vegetation, boulders and logs/woody debris. The riparian width is wide consisting of forest/swamp, with moderate to heavy/severe bank erosion. Maximum depth is <0.2 meter. Pool width is greater than riffle width with fast, moderate and interstitial velocities. Riffle run substrates are stable cobble and/or boulders and moderately stable large gravel with moderate embeddedness. The channel morphology was indicated by moderate to low sinuosity, poor to fair development, no channelization recovery and high to moderate stability.

No wetlands were delineated within the buffer zone of Stream "E".

### Necessity of Activities

The mining plan has been developed to disturb as little of the surface waters as possible. It is not possible to accomplish the mining and reclamation at this site with out disturbing portions of the above mentioned stream.

Mining around the stream channel was considered, however, if this option was utilized, recovery of the #11 and #12 coal seams would be nearly impossible, and definitely not economically feasible. After careful consideration there are no other options for drainage control at this site. Portions of the permit and adjacent areas have been previously mined. Existing topography and remaining coal reserves to be recovered allow for no other mining options.

### Water Quality/Quantity and Environmental Resources

Water quality in the upper reaches of Stream "E" is fair due to low pH and alkalinity shown in water analysis conducted from sample station S-1 prior to mining. Water quality in the lower portions of Stream "E" is good. Water analysis conducted prior to mining at D-9 show all parameters well within effluent limitations. Stream "E" is a small intermittent stream and originates at the head of hollow. Stream quantities ranged from 0.04 cfs measured during low flow to 0.19 cfs during high flow. Riparian vegetation within the buffer zone of this stream consist of typical plant life, grasses, shrubs and trees.

Riparian vegetation will be disturbed within the buffer zone of Stream "E" between the stations where pond construction and the post-mining stream reconstruction activities are to take place as noted in the "Specific Activities" section of this document. Sediment transportation affectment in the above noted streams will take place in the entire length of the streams anywhere below the proposed final highwall locations.

### Sequencing of Operations

The total life of this mining activity is projected to be approximately 5 years. The sequence of proposed activities is as follows: Pre-mining construction of sediment pond 018A and the necessary post-mining stream and buffer zone reconstruction activities will follow complete coal removal during reclamation.

### Stream Reconstruction, Diversion or Relocation

There are no stream relocations planned. All stream and buffer zone affects as well as sequencing of operations, are discussed in the previous sections of this document. Restoration of habitat and environmental conditions to those that existed prior to mining is addressed in the individual stream descriptions in the previous sections of this document. The stream will be restored to conditions equal to, or higher quality then what exists at the present time. Stream reconstruction will occur after the entire area has been mined.

Stream reconstruction will be accomplished as set forth in the original permit.

### Revegetation

The following species and amounts of vegetation and/or tree and shrubs will be planted a minimum of two and ½ times the channel bottom width where disturbance within the buffer zone has occurred.

<u>Species</u>		<u>Amount/Rate (lbs./Ac.)</u>
<u>Grasses and Legumes</u>		
Perennial Ryegrass		5 lbs./Ac.
Foxtail Millet		5 lbs./Ac.
Red Top		3 lbs./Ac.
Birdsfoot Trefoil		5 lbs./Ac.
Appalow Lespedeza		15 lbs./Ac.
<u>Trees and Shrubs</u>		
Green Ash	8' o/c	
Sycamore	8' o/c	
Button Bush	8' o/c	

Trees and shrubs will be planted by hand on approximate eight foot centers. Areas planted with riparian vegetation will not be cut or mowed in order to encourage the development of volunteer vegetation. Species of trees, shrubs, grasses and legumes which appear naturally will not be removed, but will remain in order to enhance the wildlife environment along the streams.

Care will be taken to disturb only that part of the buffer zone necessary to accomplish the objectives of the permit. All work within the buffer zone will be performed in a timely and workmanlike manner to prohibit as best can be accomplished, detrimental effects on the stream.

Yours truly,



Suzie Utter, Permitting

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

ATTACHMENT 20  
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name Bennoc, Inc. Pond # 018

Type of impoundment Excavated Permanent \_\_\_\_\_, Temporary X

1. POND DRAINAGE AREA DATA:

- a) Drainage area 10 acres
- b) Disturbed area 10 acres
- c) Ave. land slope 10 %
- d) Hydrologic soil group C
- e) Hydraulic length 450 ft.
- f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

- 1) Design method (s) including computer programs: SEDCAD 4.0
- 2) SCS curve number 85

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	<u>3.7</u>	<u>22</u>
2) 25 year, 24 hour =	<u>4.3</u>	<u>27</u>
3) 50 year, 6 hour = (if permanent)	_____	_____
4) 100 year, 6 hour = (if 20/20 size)	_____	_____

3. POND SIZE:

a) Dimensions: N/A Pond is totally excavated.

- 1) Dam height \_\_\_\_\_ ft.
- 2) Dam width \_\_\_\_\_ ft. (MIN)
- 3) Dam length \_\_\_\_\_ ft.
- 4) Dam downstream slope \_\_\_\_\_ % (MAX)
- 5) Dam upstream slope \_\_\_\_\_ % (MAX)
- 6) Core length \_\_\_\_\_ ft. \_\_\_\_\_ ft. \_\_\_\_\_ ft.

b) Sediment storage volume 3.73 ac. ft. is provided below the 1098.0 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.ft.
1) Bottom of pond	<u>1092.0</u>	<u>0.50</u>	<u>0</u>
2) Streambed at upstream toe:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
3) Principal spillway inlet:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
4) Exit Channel Crest:	<u>1098.0</u>	<u>0.75</u>	<u>3.73</u>
5) Top of embankment:	<u>1101.0</u>	<u>0.89</u>	<u>6.18</u>

4. PRINCIPAL SPILLWAY: N/A
- Pipe length \_\_\_\_\_ ft.
  - Pipe diameter \_\_\_\_\_ in.
  - Pipe slope \_\_\_\_\_ %
  - Riser diameter \_\_\_\_\_ in.
  - Riser height \_\_\_\_\_ ft.
  - Type of pipe \_\_\_\_\_
  - Number of anti-seep collars \_\_\_\_\_; spacing along pipe \_\_\_\_\_ ft.
  - Does the design include a trash rack? \_\_\_\_\_ Yes, \_\_\_\_\_ No.
  - Does the design include an anti-vortex device? \_\_\_\_\_ Yes, \_\_\_\_\_ No.
5. EMERGENCY SPILLWAY/EXIT CHANNEL:
- Base width 12 ft.
  - Design flow depth 0.9 ft.      Depth in level section 0.9 ft.
  - Exit slope 3.8 %
  - Exit velocity 3.4 fps
  - Channel lining Grass Mixture
  - Side slopes 2:1
  - Freeboard 2.1 ft.
  - Entrance slope 50 %
  - Length of level section 20 ft.
6. The minimum static factor of safety for this impoundment is 1.5
7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.
8. COMMENTS:
9. Is this an MSHA structure? \_\_\_\_\_ Yes, X No. If "yes," provide the MSHA ID. number if one has been assigned \_\_\_\_\_
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.
11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M. Brafford  
Signature

10-9-01  
Date

P.E. SEAL





OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

ATTACHMENT 20  
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name Bennoc, Inc. Pond # 018A

Type of impoundment Excavated Permanent       , Temporary X

1. POND DRAINAGE AREA DATA:

- a) Drainage area 23 acres
- b) Disturbed area 13 acres
- c) Ave. land slope 10 %
- d) Hydrologic soil group C
- e) Hydraulic length 570 ft.
- f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

- 1) Design method (s) including computer programs: SEDCAD 4.0
- 2) SCS curve number 85

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	<u>3.7</u>	<u>51</u>
2) 25 year, 24 hour =	<u>4.3</u>	<u>62</u>
3) 50 year, 6 hour = (if permanent)	<u>      </u>	<u>      </u>
4) 100 year, 6 hour = (if 20/20 size)	<u>      </u>	<u>      </u>

3. POND SIZE:

a) Dimensions:

- 1) Dam height 19 ft.
- 2) Dam width 12 ft. (MIN)
- 3) Dam length 225 ft.
- 4) Dam downstream slope 33 % (MAX)
- 5) Dam upstream slope 50 % (MAX)
- 6) Core length 210 ft. 10 ft. 4 ft.

- b) Sediment storage volume 6.36 ac. ft. is provided below the 1095.0 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.ft.
1) Bottom of pond	<u>1080.0</u>	<u>0</u>	<u>0</u>
2) Streambed at upstream toe:	<u>1080.0</u>	<u>0</u>	<u>0</u>
3) Principal spillway inlet:	<u>1095.0</u>	<u>1.15</u>	<u>6.36</u>
4) Exit Channel Crest:	<u>1096.5</u>	<u>1.34</u>	<u>8.22</u>
5) Top of embankment:	<u>1099.0</u>	<u>1.70</u>	<u>12.00</u>

## 4. PRINCIPAL SPILLWAY:

- a) Pipe length 115 ft.
- b) Pipe diameter 12 in.
- c) Pipe slope 12 %
- d) Riser diameter 18 in.
- e) Riser height 10 ft.
- f) Type of pipe CMP or Equivalent
- g) Number of anti-seep collars 5; spacing along pipe 20 ft.
- h) Does the design include a trash rack? X Yes,        No.
- i) Does the design include an anti-vortex device? X Yes,        No.

## 5. EMERGENCY SPILLWAY/EXIT CHANNEL:

- a) Base width 12 ft.
- b) Design flow depth 0.2 ft.      Depth in level section 0.4 ft.
- c) Exit slope 2 %
- d) Exit velocity 0.7 fps
- e) Channel lining Grass Mixture
- f) Side slopes 2:1
- g) Freeboard 3.5 ft.
- h) Entrance slope 4.3 %
- i) Length of level section 20 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

## 8. COMMENTS:

9. Is this an MSHA structure?        Yes, X No. If "yes," provide the MSHA ID. number if one has been assigned       

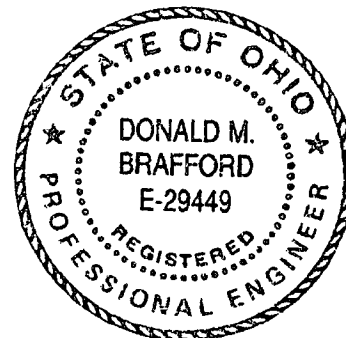
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M. Brafford  
Signature

10-9-01  
Date

P.E. SEAL



November 29, 2001

Scott Stiteler  
ODNR Division of Mineral  
1855 Fountain Square Court Bldg. H-3  
Columbus, Ohio 43224

Re: Bennoc, Inc. A.R.P. R-1159-2

Dear Scott:

In regard to the attached Review Comments we received on November 26, 2001, the following revisions have been completed:

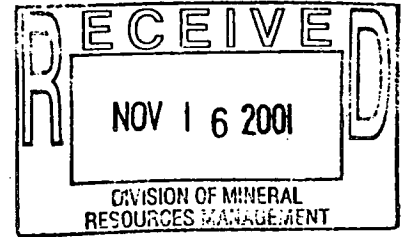
1. Revised Item 5. of the A.R.P. to briefly discuss how the proposed change will affect the approved drainage control plan.
2. No new diversions will be constructed.
3. Submitting a Stream Buffer Zone Variance Request for Unnamed Stream "E".

Also added Stream Buffer Zone to A.R.P. map legend.

Jack A. Hamilton & Assoc., Inc.  
Consultants for Bennoc, Inc.

*Cathy M. Bihlman*  
Cathy M. Bihlman  
Permitting

Bennoc, Inc.  
ARP R-1159-2  
Review Comments  
Jeff Emmons  
November 14, 2001



1. Revise item 5 of the ARP to briefly address how this proposed change will affect the approved drainage control plan (ie. pond 5 will be built smaller, pond 5 will not be built as #11 coal will not be mined in this watershed, etc.).
2. If diversion ditches will be constructed in association with the proposed ponds, show their proposed location on the map and submit designs as necessary.
3. Proposed temporary pond 18A will be constructed in the buffer zone of an intermittent stream. Submit a buffer zone variance request.

X   New Submittal  
       Revised Submittal R-                     

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINES AND RECLAMATION**

**APPLICATION TO REVISE A COAL MINING PERMIT**

Note: Refer to the Division's "General Guideline for Processing ARPs" and "Requirements for Specific Types of Common ARPs" for guidance on submitting and processing ARPs.

1. Applicant's Name   BENNOC, INC.  

Address   38722 NATIONAL RD., P.O. BOX 208  

City   MORRISTOWN   State   OHIO   Zip   43759  

Telephone Number   740   -   782   -   1330  

2. Permit Number   D-1159   .

3. Section of mining and reclamation plan to be revised:  
  PART 2, ITEM H(6) & PART 3, ITEM E(2)  

4. Describe in detail the proposed revision and submit any necessary drawings, plans, maps, etc.:

THIS REVISION IS TO ADD TWO SEDIMENT PONDS TO THE DRAINAGE CONTROL SYSTEM. SEE ATTACHED ADDENDA.

5. Describe in detail the reason for requesting the revision:

PONDS 018 & 018A WILL PROVIDE ADDITIONAL SEDIMENT STORAGE FOR THE #12 COAL REMOVAL AREA. DIVERSION DITCH DD1-A DIRECTING RUNOFF TO POND 001 WILL BE SHORTENED BY APPROXIMATELY 700' & DIVERSION DITCH DD-8A DIRECTING RUNOFF TO POND 008 WILL BE SHORTENED BY APPROXIMATELY 540'.

6. Will this revision constitute a significant alteration from the mining and reclamation operations contemplated in the original permit?        Yes,   X   No.  
(Note: refer to paragraph (E) (2) of 1501:13-04-06 of the Ohio Administrative Code to determine if a revision is deemed significant.)

If "yes", complete the following items 7 through 9.

Chief,  
Ohio Department of Natural Resources  
Division of Mineral Resources Management  
1855 Fountain Square Court  
Columbus, Ohio 43224

**RE: Stream Buffer Zone Variance Request**

Dear Chief:

In accordance with O.A.C. Section 1501:13-9-04 (A)(1) and Hydrology/Permitting PPD #98-1, Bennoc, Inc. is hereby requesting a variance to conduct additional coal mining operations within the buffer zone of Stream "E" as shown on the enclosed A.R.P. map and described below.

**Specific Activities:**

**Unnamed Stream "E"**

Additional activities to be conducted within the buffer zone of Stream "E" consists of pond construction and the post mining reconstruction of Stream "E". Approximately 80 feet of the stream will be affected from the head of hollow to Station 0+80. See original permit for Stream Channel Reconstruction.

For purposes of this description, the beginning point of Stream "E" is located at the head of hollow, this beginning point is designated as Station 0+00 for Stream "E". Stream "E" flows in a southeasterly direction and discharges into Piney Creek. The entire stream is located within the permit area. There are no major suspected sources of impacts on this stream except for the limited watershed. This stream has not been affected by previous mining.

Pond 018A will be installed as soon as possible, and will take approximately one week to construct. To protect the downstream portion of Stream "E", construction of Pond 018A will be conducted during favorable weather conditions. This pond will be located partially within the buffer zone and encroaches on approximately 0.7 acres between the head of hollow and Station 0+80. Only that area necessary for pond construction will be affected. Construction will be done in a timely manner, stabilization by seeding and planting will be done as soon as possible after construction is complete and where possible, runoff from offsite areas will be prevented from flowing across disturbed areas. Silt fences and/or straw bales, and if necessary, sumps will be utilized to trap sediment during pond construction. The pond will be removed after mining. Removal, grading and seeding of Pond 018A will be done in the first appropriate season after successful vegetation has been established for at least two years to prevent post-mining affects on Stream "E". If removal occurs earlier than Division approval would first be sought and obtained.

The reconstruction plans for Stream "E" are contained in the original permit D-1159. The reconstruction of the stream will be conducted as expediently as possible during favorable weather conditions to minimize the duration of additional sediment contribution to Stream "E". Stream reconstruction will occur after mining is complete during the reclamation phase of the operation. The base channel will have a maximum grade of 11.3% and will be composed of cohesive mined soils from the mining operation. The channel cross section will be trapezoidal with 2:1 side slopes. No additional measures are planned for restoration of habitat and environmental conditions. The plan as submitted is adequate to restore habitat and environmental conditions to those that existed prior to mining. Disturbance within the buffer zone will occur until reclamation at the completion of mining.

Existing instream physical habitat conditions consist of substrates of boulder/slabs and cobble originating from sandstone with moderate silt and moderate embeddedness. The instream cover is moderate, consisting of overhanging vegetation, boulders and logs/woody debris. The riparian width is wide consisting of forest/swamp, with moderate to heavy/severe bank erosion. Maximum depth is <0.2 meter. Pool width is greater than riffle width with fast, moderate and interstitial velocities. Riffle run substrates are stable cobble and/or boulders and moderately stable large gravel with moderate embeddedness. The channel morphology was indicated by moderate to low sinuosity, poor to fair development, no channelization recovery and high to moderate stability.

No wetlands were delineated within the buffer zone of Stream "E".

### Necessity of Activities

The mining plan has been developed to disturb as little of the surface waters as possible. It is not possible to accomplish the mining and reclamation at this site with out disturbing portions of the above mentioned stream.

Mining around the stream channel was considered, however, if this option was utilized, recovery of the #11 and #12 coal seams would be nearly impossible, and definitely not economically feasible. After careful consideration there are no other options for drainage control at this site. Portions of the permit and adjacent areas have been previously mined. Existing topography and remaining coal reserves to be recovered allow for no other mining options.

### Water Quality/Quantity and Environmental Resources

Water quality in the upper reaches of Stream "E" is fair due to low pH and alkalinity shown in water analysis conducted from sample station S-1 prior to mining. Water quality in the lower portions of Stream "E" is good. Water analysis conducted prior to mining at D-9 show all parameters well within effluent limitations. Stream "E" is a small intermittent stream and originates at the head of hollow. Stream quantities ranged from 0.04 cfs measured during low flow to 0.19 cfs during high flow. Riparian vegetation within the buffer zone of this stream consist of typical plant life, grasses, shrubs and trees.

Riparian vegetation will be disturbed within the buffer zone of Stream "E" between the stations where pond construction and the post-mining stream reconstruction activities are to take place as noted in the "Specific Activities" section of this document. Sediment transportation affectment in the above noted streams will take place in the entire length of the streams anywhere below the proposed final highwall locations.

### Sequencing of Operations

The total life of this mining activity is projected to be approximately 5 years. The sequence of proposed activities is as follows: Pre-mining construction of sediment pond 018A and the necessary post-mining stream and buffer zone reconstruction activities will follow complete coal removal during reclamation.

### Stream Reconstruction, Diversion or Relocation

There are no stream relocations planned. All stream and buffer zone affects as well as sequencing of operations, are discussed in the previous sections of this document. Restoration of habitat and environmental conditions to those that existed prior to mining is addressed in the individual stream descriptions in the previous sections of this document. The stream will be restored to conditions equal to, or higher quality then what exists at the present time. Stream reconstruction will occur after the entire area has been mined.

Stream reconstruction will be accomplished as set forth in the original permit.

### Revegetation


The following species and amounts of vegetation and/or tree and shrubs will be planted a minimum of two and ½ times the channel bottom width where disturbance within the buffer zone has occurred.

<u>Species</u>		<u>Amount/Rate (lbs./Ac.)</u>
<u>Grasses and Legumes</u>		
Perennial Ryegrass		5 lbs./Ac.
Foxtail Millet		5 lbs./Ac.
Red Top		3 lbs./Ac.
Birdsfoot Trefoil		5 lbs./Ac.
Appalow Lespedeza		15 lbs./Ac.
<u>Trees and Shrubs</u>		
Green Ash	8' o/c	
Sycamore	8' o/c	
Button Bush	8' o/c	

Trees and shrubs will be planted by hand on approximate eight foot centers. Areas planted with riparian vegetation will not be cut or mowed in order to encourage the development of volunteer vegetation. Species of trees, shrubs, grasses and legumes which appear naturally will not be removed, but will remain in order to enhance the wildlife environment along the streams.

Care will be taken to disturb only that part of the buffer zone necessary to accomplish the objectives of the permit. All work within the buffer zone will be performed in a timely and workmanlike manner to prohibit as best can be accomplished, detrimental effects on the stream.

Yours truly,

  
Suzie Utter, Permitting







X   New Submittal  
       Revised Submittal R-                     

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINES AND RECLAMATION**

**APPLICATION TO REVISE A COAL MINING PERMIT**

Note: Refer to the Division's "General Guideline for Processing ARPs" and "Requirements for Specific Types of Common ARPs" for guidance on submitting and processing ARPs.

1. Applicant's Name   BENNOC, INC.  

Address   38722 NATIONAL RD., P.O. BOX 208  

City   MORRISTOWN   State   OHIO   Zip   43759  

Telephone Number   740   -   782   -   1330  

2. Permit Number   D-1159   .

3. Section of mining and reclamation plan to be revised:  
  PART 2, ITEM H(6)  

4. Describe in detail the proposed revision and submit any necessary drawings, plans, maps, etc.:

  THIS REVISION IS TO ADD TWO SEDIMENT PONDS TO THE DRAINAGE CONTROL SYSTEM. SEE ATTACHED ADDENDA.  

5. Describe in detail the reason for requesting the revision:

  TO PROVIDE ADDITIONAL SEDIMENT STORAGE.  

6. Will this revision constitute a significant alteration from the mining and reclamation operations contemplated in the original permit?        Yes,   X   No.  
(Note: refer to paragraph (E) (2) of 1501:13-04-06 of the Ohio Administrative Code to determine if a revision is deemed significant.)

If "yes", complete the following items 7 through 9.

7. In the space below give the name and address of the newspaper in which the public notice is to be published.
8. In the space below give the text of the public notice that is to be published. (Include the information required by paragraph (A)(1) of 1501:13-05-01 of the Ohio Administrative Code.)
9. In the space below give the name and address of the public office where this application is to be filed for public viewing.

I, the undersigned, a responsible official of the applicant, do hereby verify the information contained in this revision request is true and correct to the best of my information and belief.

<u>Larry Conway</u>	<u>10-8-01</u>
Print Name	Date
<u>Larry Conway</u>	<u>President</u>
Signature	Title

Sworn before me and subscribed in my presence this 10th day of October, 2008 1

Ellen M. Green  
Notary Public

2006

**FOR DIVISION USE ONLY**

This request is hereby \_\_\_\_\_ .

\_\_\_\_\_  
Chief, Division of Mines and Reclamation

\_\_\_\_\_  
Date

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

ATTACHMENT 20  
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name Bennoc, Inc. Pond # 018

Type of impoundment Excavated Permanent \_\_\_\_\_, Temporary X

1. POND DRAINAGE AREA DATA:

- a) Drainage area 10 acres
- b) Disturbed area 10 acres
- c) Ave. land slope 10 %
- d) Hydrologic soil group C
- e) Hydraulic length 450 ft.
- f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD 4.0

2) SCS curve number 85

b) Rainfall Amount/Peak Flow                      Rainfall, in.                      Peak flow, cfs.

- |                       |            |           |
|-----------------------|------------|-----------|
| 1) 10 year, 24 hour = | <u>3.7</u> | <u>22</u> |
| 2) 25 year, 24 hour = | <u>4.3</u> | <u>27</u> |
| 3) 50 year, 6 hour =  | _____      | _____     |
| (if permanent)        |            |           |
| 4) 100 year, 6 hour = | _____      | _____     |
| (if 20/20 size)       |            |           |

3. POND SIZE:

a) Dimensions: N/A Pond is totally excavated.

- |                              |  |
|------------------------------|--|
| 1) Dam height _____ ft.      | 4) Dam downstream slope _____ % (MAX)        |
| 2) Dam width _____ ft. (MIN) | 5) Dam upstream slope _____ % (MAX)          |
| 3) Dam length _____ ft.      | 6) Core length _____ ft. _____ ft. _____ ft. |

b) Sediment storage volume 3.73 ac. ft. is provided below the 1098.0 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.ft.
1) Bottom of pond	<u>1092.0</u>	<u>0.50</u>	<u>0</u>
2) Streambed at upstream toe:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
3) Principal spillway inlet:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
4) Exit Channel Crest:	<u>1098.0</u>	<u>0.75</u>	<u>3.73</u>
5) Top of embankment:	<u>1101.0</u>	<u>0.89</u>	<u>6.18</u>

4. PRINCIPAL SPILLWAY: N/A
- Pipe length \_\_\_\_\_ ft.
  - Pipe diameter \_\_\_\_\_ in.
  - Pipe slope \_\_\_\_\_ %
  - Riser diameter \_\_\_\_\_ in.
  - Riser height \_\_\_\_\_ ft.
  - Type of pipe \_\_\_\_\_
  - Number of anti-seep collars \_\_\_\_\_; spacing along pipe \_\_\_\_\_ ft.
  - Does the design include a trash rack? \_\_\_\_\_ Yes, \_\_\_\_\_ No.
  - Does the design include an anti-vortex device? \_\_\_\_\_ Yes, \_\_\_\_\_ No.
5. EMERGENCY SPILLWAY/EXIT CHANNEL:
- Base width 12 ft.
  - Design flow depth 0.9 ft.      Depth in level section 0.9 ft.
  - Exit slope 3.8 %
  - Exit velocity 3.4 fps
  - Channel lining Grass Mixture
  - Side slopes 2:1
  - Freeboard 2.1 ft.
  - Entrance slope 50 %
  - Length of level section 20 ft.
6. The minimum static factor of safety for this impoundment is 1.5
7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.
8. COMMENTS:
9. Is this an MSHA structure? \_\_\_\_\_ Yes, X No. If "yes," provide the MSHA ID. number if one has been assigned \_\_\_\_\_
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.
11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Signature

*Donald M. Brafford*

Date

10-9-01

P.E. SEAL



OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

ATTACHMENT 20  
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

Applicant's Name Bennoc, Inc. Pond # 018A

Type of impoundment Excavated Permanent            Temporary X

1. POND DRAINAGE AREA DATA:

- a) Drainage area 23 acres
- b) Disturbed area 13 acres
- c) Ave. land slope 10 %
- d) Hydrologic soil group C
- e) Hydraulic length 570 ft.
- f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

a) Method:

1) Design method (s) including computer programs: SEDCAD 4.0

2) SCS curve number 85

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	<u>3.7</u>	<u>51</u>
2) 25 year, 24 hour =	<u>4.3</u>	<u>62</u>
3) 50 year, 6 hour = (if permanent)	<u>          </u>	<u>          </u>
4) 100 year, 6 hour = (if 20/20 size)	<u>          </u>	<u>          </u>

3. POND SIZE:

a) Dimensions:

- 1) Dam height 19 ft.
- 2) Dam width 12 ft. (MIN)
- 3) Dam length 225 ft.
- 4) Dam downstream slope 33 % (MAX)
- 5) Dam upstream slope 50 % (MAX)
- 6) Core length 210 ft. 10 ft. 4 ft.

b) Sediment storage volume 6.36 ac. ft. is provided below the 1095.0 foot elevation.

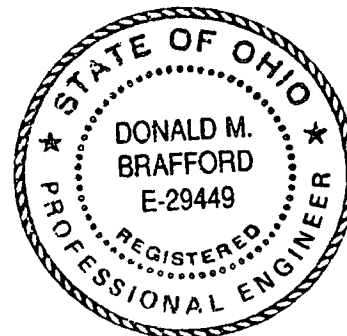
c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.ft.
1) Bottom of pond	<u>1080.0</u>	<u>0</u>	<u>0</u>
2) Streambed at upstream toe:	<u>1080.0</u>	<u>0</u>	<u>0</u>
3) Principal spillway inlet:	<u>1095.0</u>	<u>1.15</u>	<u>6.36</u>
4) Exit Channel Crest:	<u>1096.5</u>	<u>1.34</u>	<u>8.22</u>
5) Top of embankment:	<u>1099.0</u>	<u>1.70</u>	<u>12.00</u>

4. PRINCIPAL SPILLWAY:
- Pipe length 115 ft.
  - Pipe diameter 12 in.
  - Pipe slope 12 %
  - Riser diameter 18 in.
  - Riser height 10 ft.
  - Type of pipe CMP or Equivalent
  - Number of anti-seep collars 5; spacing along pipe 20 ft.
  - Does the design include a trash rack? X Yes,        No.
  - Does the design include an anti-vortex device? X Yes,        No.
5. EMERGENCY SPILLWAY/EXIT CHANNEL:
- Base width 12 ft.
  - Design flow depth 0.2 ft.      Depth in level section 0.4 ft.
  - Exit slope 2 %
  - Exit velocity 0.7 fps
  - Channel lining Grass Mixture
  - Side slopes 2:1
  - Freeboard 3.5 ft.
  - Entrance slope 4.3 %
  - Length of level section 20 ft.
6. The minimum static factor of safety for this impoundment is 1.5
7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.
8. COMMENTS:
9. Is this an MSHA structure?        Yes, X No. If "yes," provide the MSHA ID. number if one has been assigned
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.
11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

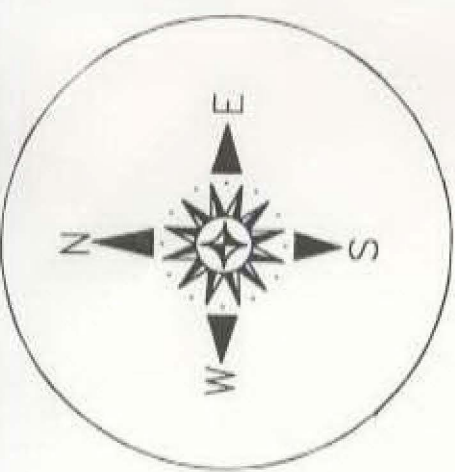
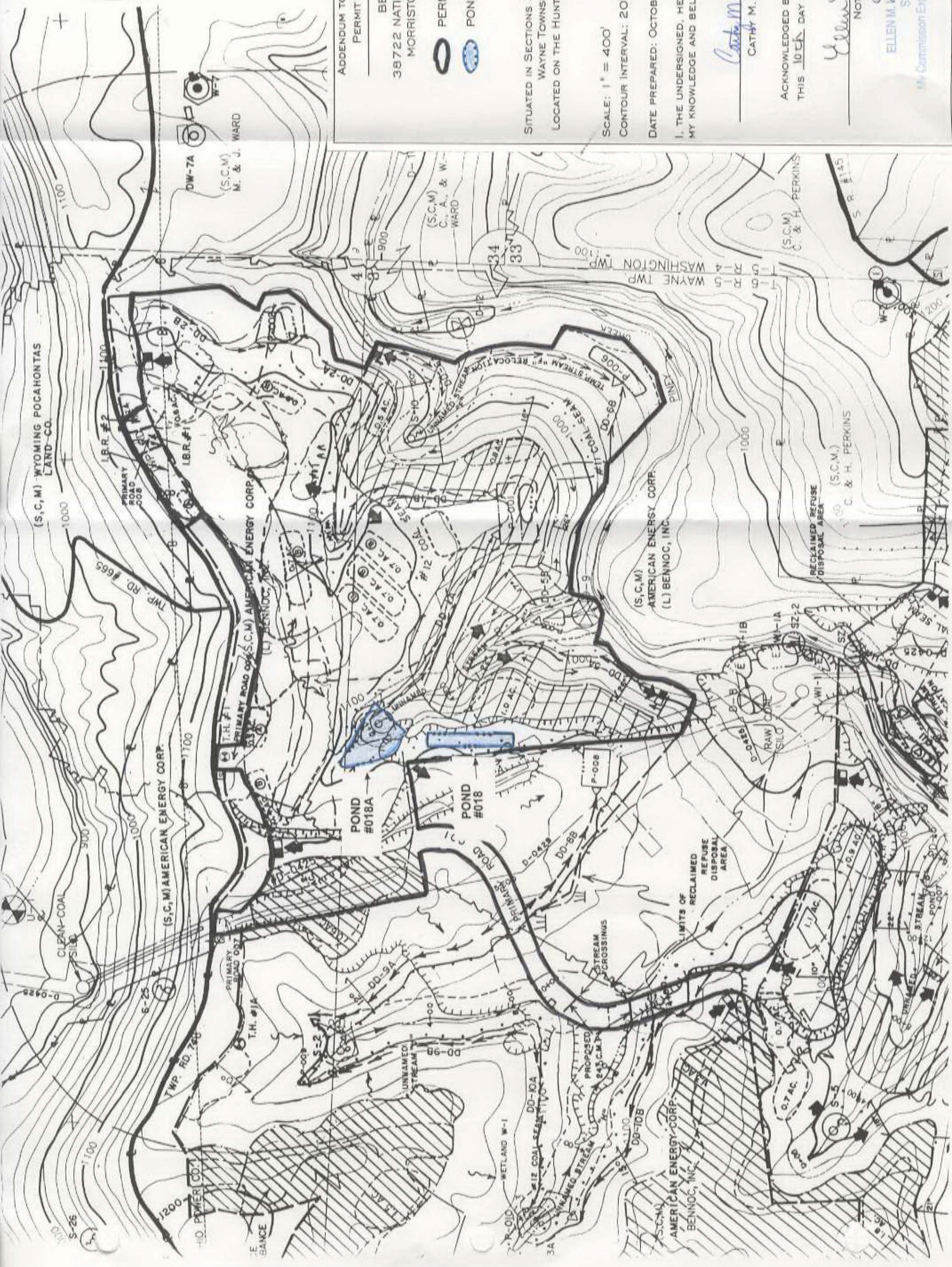
Donald M. Brafford  
Signature

10-9-01  
Date

P.E. SEAL







ADDENDUM TO APPLICATION TO REVISE  
PERMIT D-1159, ITEM 4.

BENNOG, INC.  
38722 NATIONAL RD., P.O. BOX 208  
MORRISTOWN, OHIO 43759

PERMIT D-1159

PONDS 018 & 018A

SITUATED IN SECTIONS 3 & 4, TOWNSHIP 6, RANGE 5,  
WAYNE TOWNSHIP, BELMONT CO., OH.  
LOCATED ON THE HUNTER 7.5 MIN. QUADRANGLE MAP.

SCALE: 1" = 400'  
CONTOUR INTERVAL: 20'

DATE PREPARED: OCTOBER 5, 2001

I, THE UNDERSIGNED, HEREBY CERTIFY THAT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF THIS MAP IS TRUE AND CORRECT.

*Cathy M. Buhlman*

CATHY M. BIHLMAN P.S. #7199

ACKNOWLEDGED BEFORE ME A NOTARY PUBLIC  
THIS 10th DAY OF October, 2001.

*Ellen M. Greer*

NOTARY PUBLIC

GREEN  
ELLEN M. GREER, Notary Public

State of Ohio

My Commission Expires September 23, 2006



April 1989

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

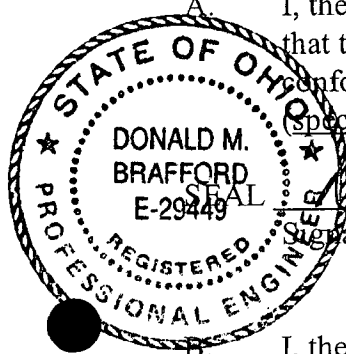
CERTIFICATION 1

CERTIFICATION OF SEDIMENT CONTROL SYSTEM CONSTRUCTION

Permittee's Name AMERICAN ENERGY CORPORATION

Permit D-1159

Complete both certification statements listed below.



A. I, the undersigned, a surveyor or engineer registered in the State of Ohio, hereby certify that the measurements of the constructed sediment control system described below conform to the measurements contained in the ~~approved original~~ "as built"\* (specify one) design plan.

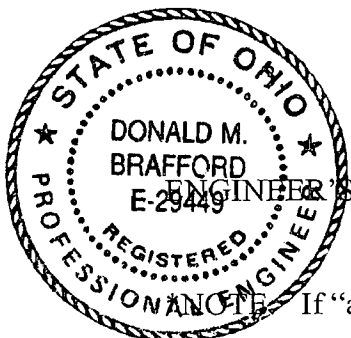
Donald M. Brafford P.E.  
Signature Title  
(engineer/surveyor)

8-5-02  
Date

B. I, the undersigned, an engineer registered in the State of Ohio, hereby certify that the sediment control system described below has been constructed per the ~~approved original~~ "as built"\* (specify one) design specifications and criteria and that:

1. the embankment foundation area was cleared of all organic matter and the entire foundation surface scarified;
2. the fill material was free of sod, large roots, other large vegetative matter, frozen soil, and coal processing waste; and

the fill was brought up in horizontal layers of such thickness as required to facilitate compaction in accordance with prudent construction standards.



Donald M. Brafford  
ENGINEER'S SEAL

Donald M. Brafford  
Signature

8-5-02  
Date

NOTE: If "as built," then "as built" plan must be attached to this certification.

This sediment control system consists of:

Sediment ponds no. 018A, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,  
Diversions (describe in relation to pond numbers).

Other control methods (describe if different from permit descriptions)

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION

ATTACHMENT 20  
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

D-1159

AS-BUILT

Applicant's Name AMERICAN ENERGY CORPORATION Pond # 018AType of impoundment EMBANKMENT Permanent \_\_\_\_\_ Temporary ✓

## 1. POND DRAINAGE AREA DATA:

- a) Drainage area 23 acres
- b) Disturbed area 13 acres
- c) Ave. land slope 10 %
- d) Hydrologic soil group C
- e) Hydraulic length 570 ft.
- f) Cover/condition of the undisturbed area N/A

## 2. DESIGN STORM CRITERIA:

## a) Method:

- 1) Design method (s) including computer programs: SEDCAD 4.0
- 2) SCS curve number 85

b) Rainfall Amount/Peak Flow	Rainfall, in.	Peak flow, cfs.
1) 10 year, 24 hour =	<u>3.7</u>	<u>51</u>
2) 25 year, 24 hour =	<u>4.3</u>	<u>62</u>
3) 50 year, 6 hour = (if permanent)	_____	_____
4) 100 year, 6 hour = (if 20/20 size)	_____	_____

## 3. POND SIZE:

## a) Dimensions:

- 1) Dam height 19 ft.
- 2) Dam width 12 ft. (MIN)
- 3) Dam length 137 ft.
- 4) Dam downstream slope 33 % (MAX)
- 5) Dam upstream slope 50 % (MAX)
- 6) Core length 137 ft. 10 ft. 4 ft.

- b) Sediment storage volume 3.82 ac. ft. is provided below the 1082.8 foot elevation.

c) Stage/Area Data:	Elevation ft.	Surface Area ac.	Volume ac.ft.
1) Bottom of pond	<u>1066.0</u>	<u>0</u>	<u>0</u>
2) Streambed at upstream toe:	<u>1066.0</u>	<u>0</u>	<u>0</u>
3) Principal spillway inlet:	<u>1082.8</u>	<u>0.45</u>	<u>3.82</u>
4) Emergency Spillway Crest:	<u>1085.8</u>	<u>0.79</u>	<u>5.73</u>
5) Top of embankment:	<u>1087.5</u>	<u>0.89</u>	<u>7.15</u>

4. PRINCIPAL SPILLWAY:

- a) Pipe length 120 ft.
- b) Pipe diameter 12 in.
- c) Pipe slope 13 %
- d) Riser diameter 18 in.
- e) Riser height 10 ft.
- f) Type of pipe CMP
- g) Number of anti-seep collars 5; spacing along pipe 20 ft.
- h) Does the design include a trash rack?        Yes,   ✓   No.
- i) Does the design include an anti-vortex device?        Yes,   ✓   No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

- a) Base width 14 ft.
- b) Design flow depth 0.4 ft.      Depth in level section 0.3 ft.
- c) Exit slope 2.5 %
- d) Exit velocity 1.8 fps
- e) Channel lining GRASS MIXTURE
- f) Side slopes 2:1
- g) Freeboard 1.3 ft.
- h) Entrance slope 50 %
- i) Length of level section 20 ft.

6. The minimum static factor of safety for this impoundment is 1.5

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

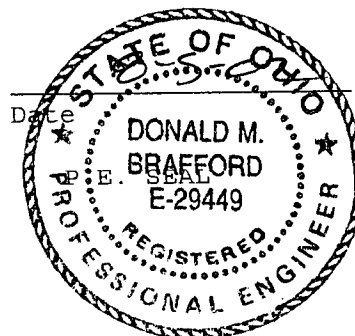
8. COMMENTS:

9. Is this an MSHA structure?        Yes,   ✓   No. If "yes," provide the MSHA ID. number if one has been assigned       

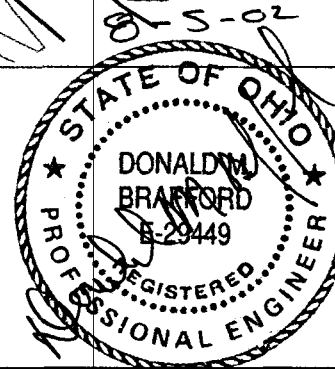
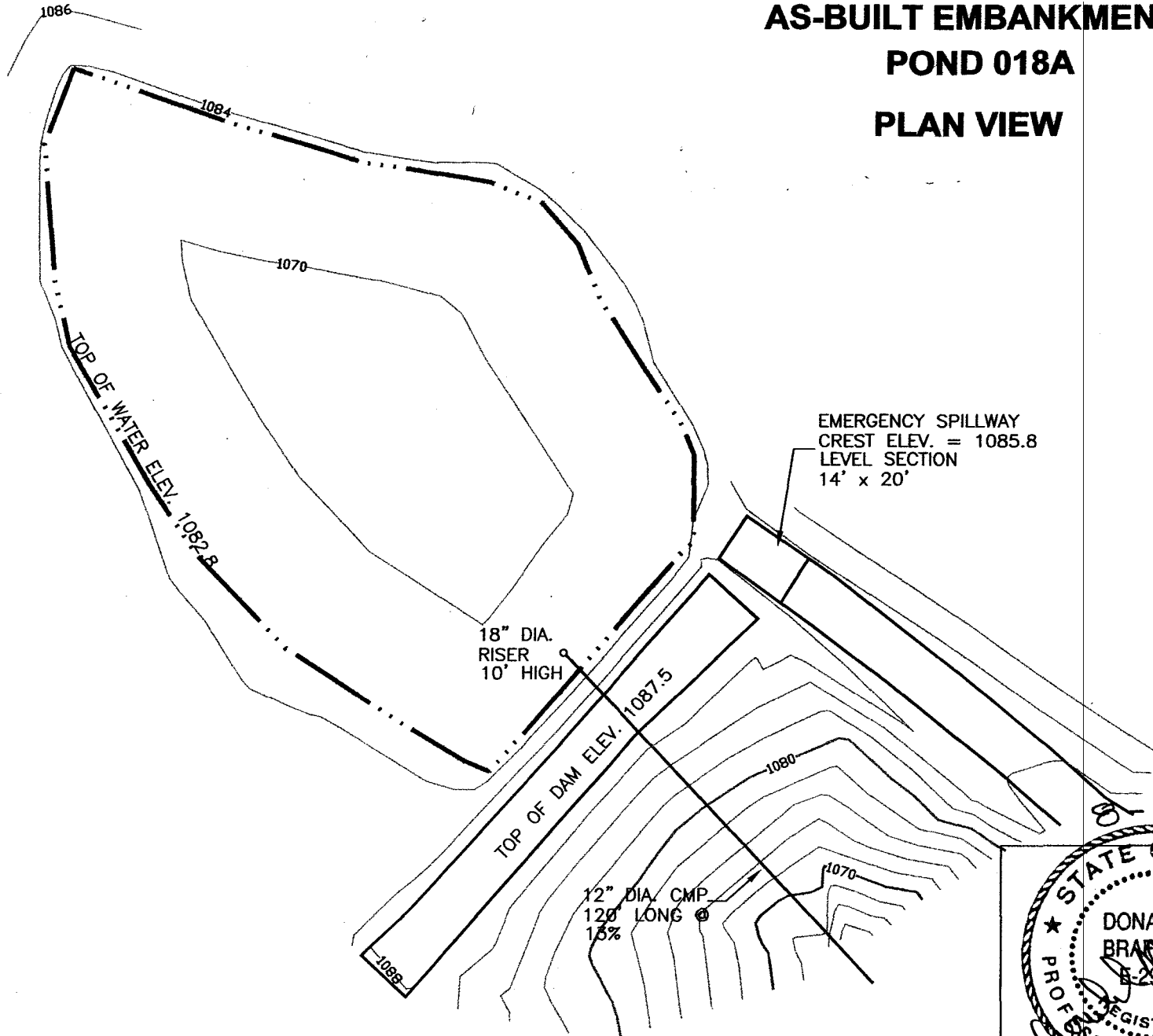
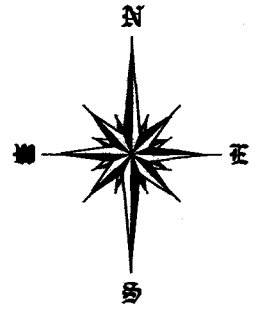
10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04(H) (2) of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

Donald M. Brafford  
Signature



# AS-BUILT EMBANKMENT POND 018A PLAN VIEW



Addendum To Attachment 20, Item 7.		
<b>AS-BUILT EMBANKMENT POND 018A</b>		
Applicant: AMERICAN ENERGY CORPORATION D-1159		
Section: 4	Township: 6	Range: 5
Township: WAYNE		County: BELMONT
Scale: 1" = 40'		Contour Interval: 2'
Date Prepared: 08/2/02	Comm #02001-S	DWG: AB_P18A
342 High St., Box 471 Flushing, Ohio 43977 Ph: (740) 968-4947 Fax: (740) 968-4225 e-mail: hamilton@lst.net www.hamiltonandassoc.com		

DRAWN BY: SSU